Estimator's Corner

NEWSLETTER

October-December 2008

Project cost estimating data provided by the
Utah Department of Transportation Engineering Services Division

This Issue's Featured Estimating Tip
Market Update and Estimating Guidance

To estimate well, we need to be aware of the recent changes in the local and national construction market. The weakening economy has reduced demand for most key construction materials. The slowdown in the construction market has also increased competition and the number of bidders on UDOT projects. This has resulted in favorable bids over the past 2-3 months. It is important to follow price trends as engineer's estimates are prepared. Current highway construction slowdowns may change if a federal economic stimulus package provides infrastructure improvement funds to the states. This means that prices could begin increasing again next year if new funds are injected into the market.

Wise utilization of available funding is critical to provide appropriate value to the public. Underestimating a project creates difficulty in awarding projects, while overestimating ties up funding that could be used for other projects.

Estimating Suggestions

Here are some suggestions to help you obtain the most current cost data to successfully prepare engineer's estimates.

- Use data from the past 12 months when researching prices in PDBS. Focus on specific projects from the past 2-3 months if possible. There may be some items with limited data. Look back farther that one year if additional data is necessary. Be cautious and apply inflation when using older data to estimate prices for your project.

- Look for similar projects, locations, and quantities.

- Look at all bidders, not just the low bidder or the high bidder.

- Avoid the tendency to use the high range in prices to make the estimate "conservative." Look for the reasonable price that you would expect for the item of work. Remember that contractors bid items of work differently and that some contractors might be the high bidder on one item of work but the low bidder on another item of work in the same project.

- Be cautious of the average price that PDBS calculates and remember that it can include a high or low bid that might skew the average and result in a price that is misleading. It is best to look at individual projects and items.

- Call local contractors. They are usually willing to take some time to discuss an upcoming project. Use the phone call to gather the necessary information and to benefit the contractor by informing them of the upcoming project. Feel free to discuss the concept of the project and share approximate quantities on key items but be aware that engineer's estimates are confidential and should not be provided to contractors. They are usually willing to help provide some rough costs. Use the data they provide to substantiate and validate your research. Remember that there are many factors involved in bid preparation. Contractor provided prices may not be exactly what is bid when the contractor has full access to all the plans and specs.

- Call suppliers. This can provide excellent information on current material prices. Remember to add costs for transport to the project site, installation, profit, and anything else that is required as part of the bid item. RSMeans is a good tool to use to determine costs for labor. David Osborn (801) 965-4142 or Jason Henrie (801) 957-8605 have access to the latest RSMeans publication and can provide data if you do not have a copy available.

- Be cautious with Lump Sum items. Make sure that it is clear in the plans exactly what is required and that the engineers estimate accounts for all the work that the contractor will need to complete.

- There is no "Silver Bullet" answer to preparing estimates or establishing costs. It requires time and effort. Focus the majority of your research on the items that constitute the largest percentage of the overall estimate.

Inflation Update

Inflation next year is projected to be significantly less that it has been over the past several years. Gasoline and diesel prices are low and are projected to remain low throughout the first six months of 2009. There will most likely be very little inflation for the first three to six months of 2009 and probably a modest 4 percent for the entire year.

Asphalt Update

The drastic reductions in the cost of a barrel of crude oil and a gallon of gasoline do not mean that asphalt prices will have similar reductions. Improvements to the refining process and the installation of cokers have reduced the amount of asphalt produced. Local supply continues to be limited due to the ongoing bankruptcy of a key supplier. A reasonable price for HMA right now for a large easy to pave project is $75 to $80 per ton and would increase based on the complexity of the work, location of the project, and quantity of material placed. Trail projects could start at $100 per ton. Plan on increases as the construction season progresses and binder supply dwindles.

Red Flags

It is recommended that red flags for materials, schedule, and planholders be negated for the next three months due to the recent favorable bidding environment. The red flag form is an excellent tool that serves as a reminder of issues that impact prices. Please continue to complete the form and use it to assist in assessing these factors and the effect they have on

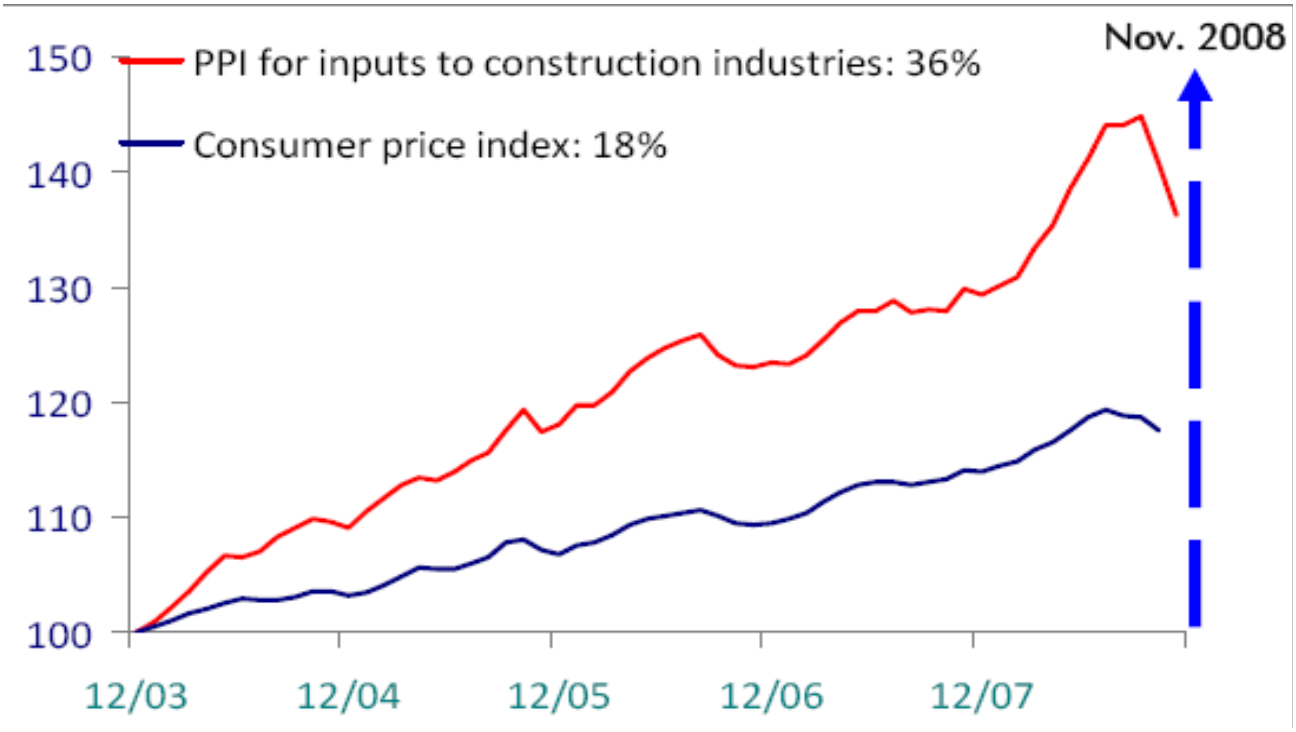
estimates. Contact David Osborn (801) 965-4142 and Jason Henrie (801) 957-8605 if you need estimating guidance.

Construction Cost Trends and Economic Information

Thomas Doe, founder of investment advisory firm Municipal Market Advisors, reported on Thursday in *USA Today* "In October alone, as much as $20 billion of new [**bond-funded state and local**] projects were postponed". The article also cited delayed or canceled school projects in several states. Utah has postponed $3.9 billion of highway construction, the *Salt Lake Tribune* reported. The trouble is declining sales. Tax revenues are off almost 9 percent for the fiscal year that began in July and gas taxes are off by 11 percent.
The Data DIGest, 11/17/08

Pruducer price index for the construction industry fell in the month of November. The segment with the largest decline was highway and street construction at -6.6 percent for the month and 3.7 percent year-over-year.
The Data DIGest, 12/8/08

Cumulative Change in Consumer and Construction Prices
(All PPIs = 100 in 12/03)
AGC of America (December 2003 = 100)
2003 – 2008

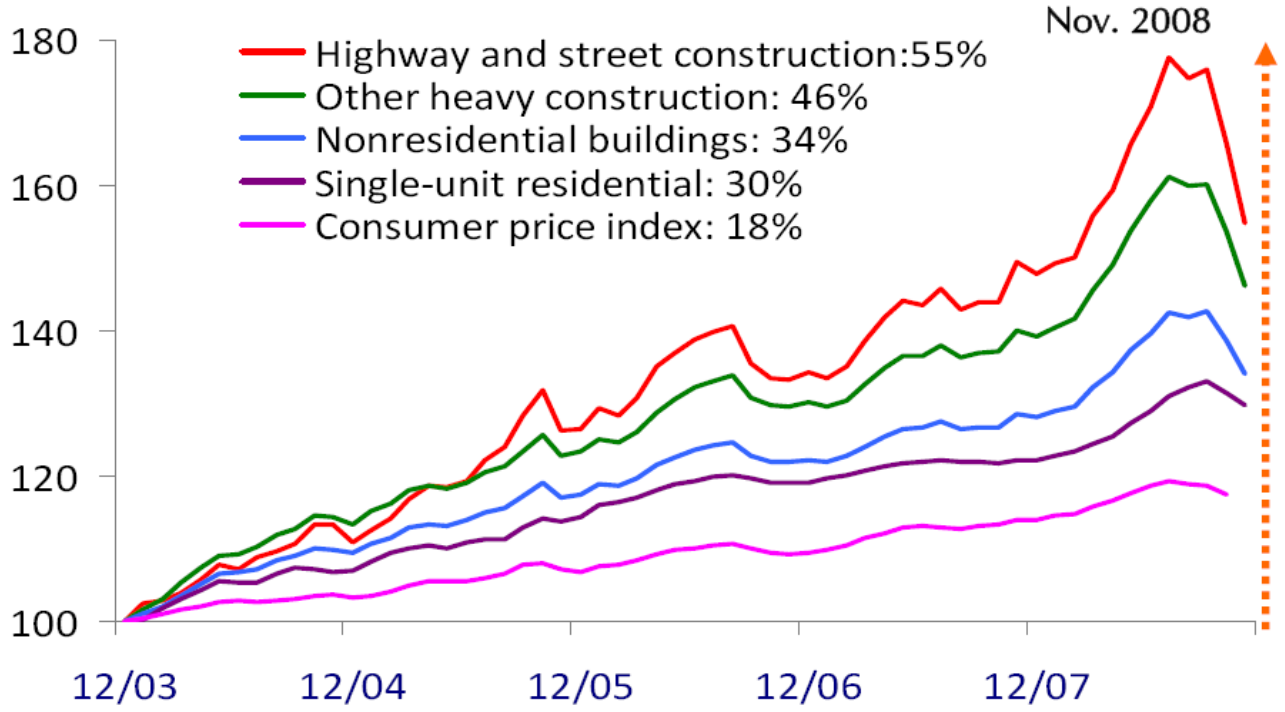


Cumulative Change in Producer Price Index (PPI) for Construction Types

(All PPIs = 100 in 12/03)

AGC of America

2003 – 2008

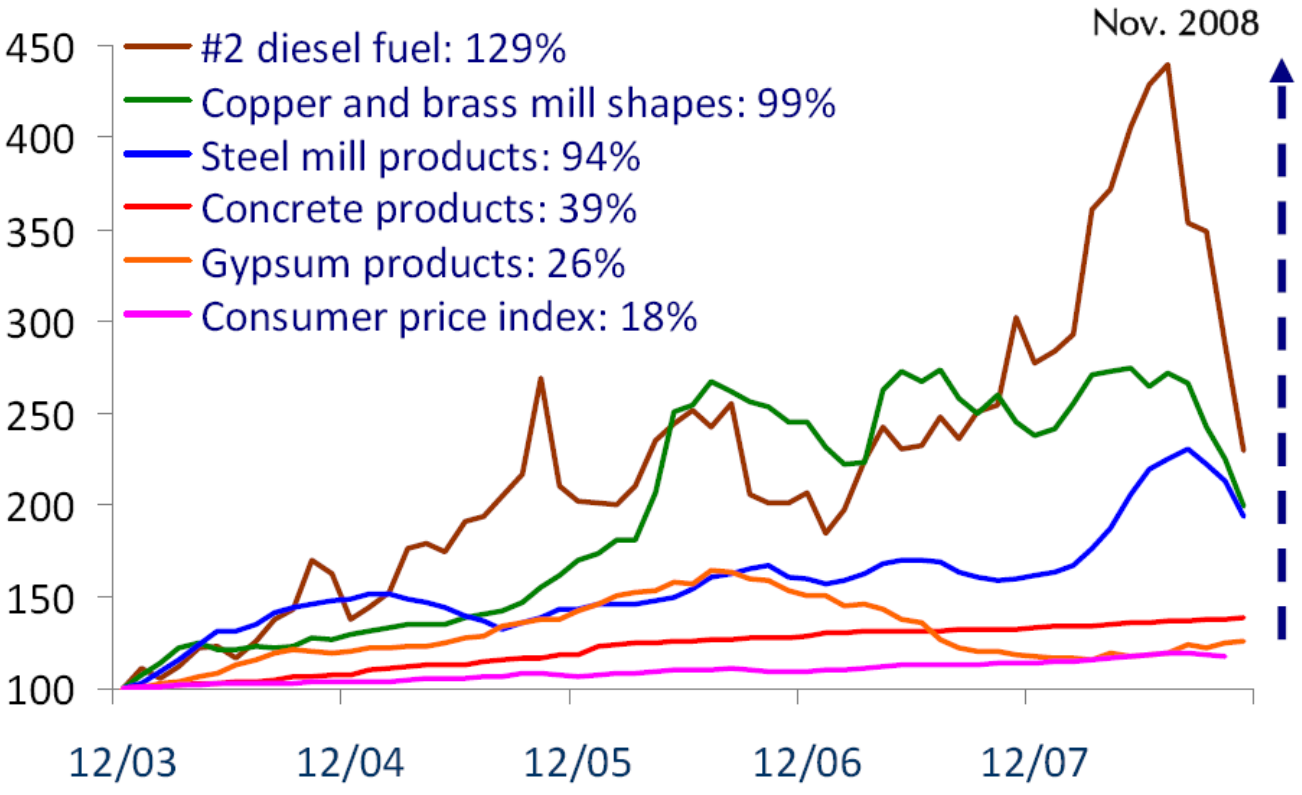


Cumulative Change in Producer Price Index (PPI) for Highway Inputs

(All PPIs = 100 in 12/03)

AGC of America

2003 – 2008



Rising Prices
Steel, Asphalt Binder, and Crude Oil

Prices by material diverged dramatically from October to December. The Producer Price Index for diesel plunged 17.5 percent but was still up 13 percent over 12 months. The different construction types account for the wide variation.
The Data DIGest – 11/17/08

Percentage Changes in Producer Price Indexes for 2001-2008

Item	2001	2002	2003	2004	2005	2006	2007	September – November 2008
Asphalt at Refineries			10.0	18.3	17.8	34.9	5.8	- 15.3
Concrete Products	2.5	-0.3	1.5	7.6	10.1	8.1	3.3	1.0
Diesel Fuel	-44.7	54.4	13.0	37.9	46.7	2.3	33.9	-20.3
Highway and Street Construction	-3.6	1.0	2.6	10.8	14.1	6.2	9.6	-6.6

Bureau of Labor Statistics, AGC of America, 12/12/08

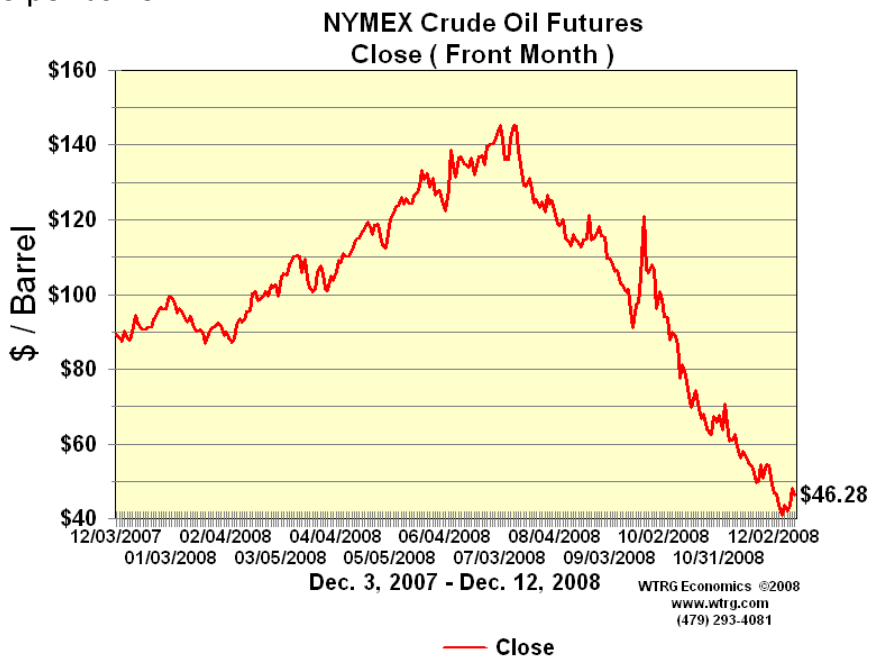
Crude Oil

Percentage Changes in Producer Price Indexes for 2001-2008

Item	2001	2002	2003	2004	2005	2006	2007	September – November 2008
Crude Oil – Domestic Production	- 42.4	+60.6	+14.3	+30.5	+49.6	+0.1	+52.4	- 30.2

Bureau of Labor Statistics, AGC of America, 12/12/08

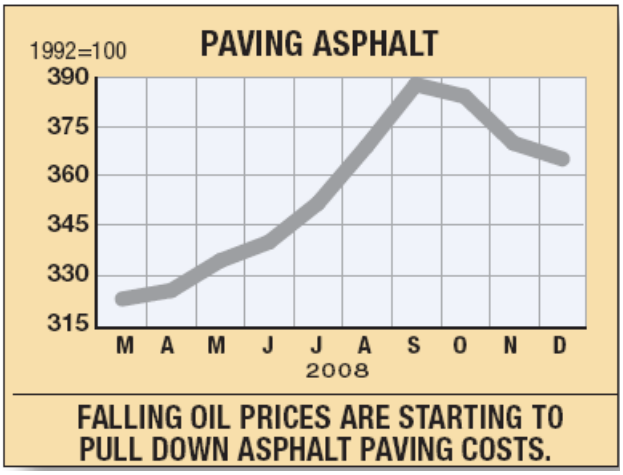
December 12, 2008, NYMEX West Texas Intermediate for January delivery closed down $1.70 at $46.28 per barrel.



Asphalt

Asphalt paving prices have started to weaken after the sharp drop in oil prices, which have fallen more than 50 percent from their peak earlier this year. The ENR 20-city average price for asphalt paving oil fell for the third consecutive month. Recent declines are still working against record highs, leaving prices 14 percent above the December 2007 level. Prices for asphalt cutback and rapid-set emulsion are still 5 percent and 8 percent higher than a year ago, despite recent cuts.
ENR- 12/1/08

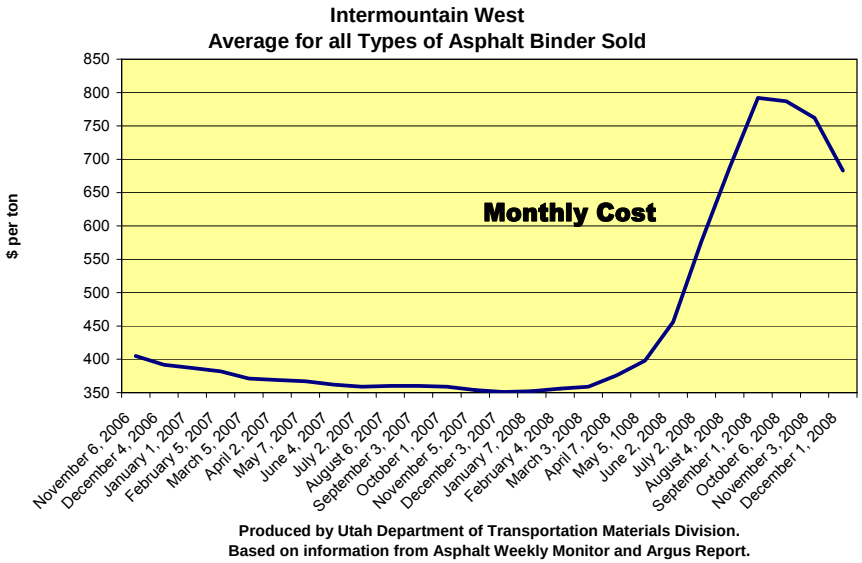
Liquid asphalt paving prices opened the month of November with producers rolling back prices 4 percent from October. Asphalt prices are still coasting on huge price increases during the first half of the year and remain 16 percent above 2007.
ENR- 11/3/08



Percentage Changes in Producer Price Indexes for 2001-2008

Item	2001	2002	2003	2004	2005	2006	2007	September – November 2008
Asphalt at Refinery	-	-	10.0	18.3	17.8	34.9	5.8	- 15.3

Bureau of Labor Statistics, AGC of America, 12/12/08

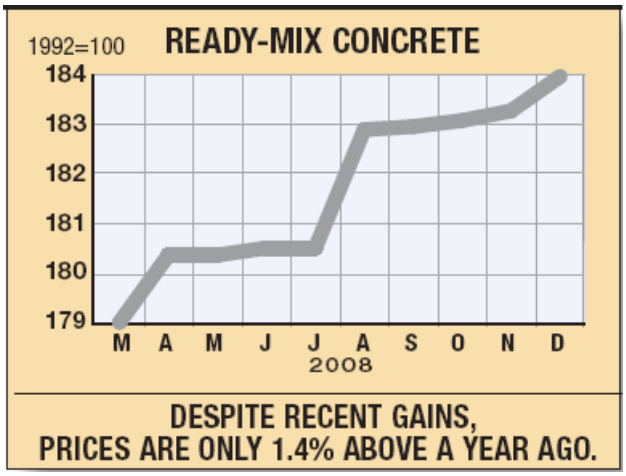


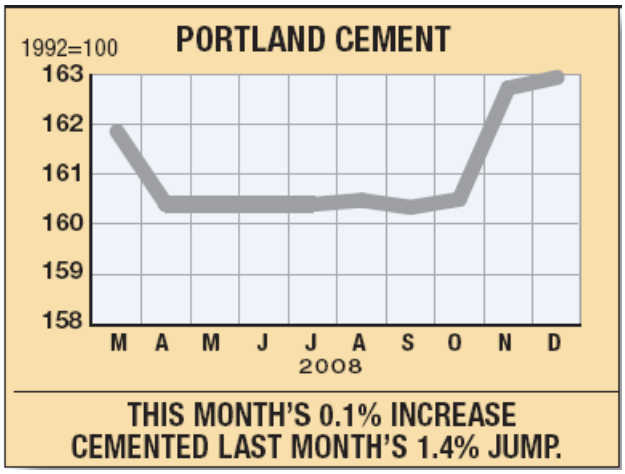
Note: This graph is intended to show the direction of asphalt binder costs and not actual costs for asphalt binder.

Cement

Portland cement costs inched upward another 0.1 percent this month, following a 1.4 percent increase during the previous month.
ENR- 12/1/08

Cement prices showed little movement during the last six months after producers rolled back prices 1 percent last April. The ENR 20-city average price for type-one portland cement increased 1.5 percent in October to $101.79 a ton. Despite the year-end rally, cement prices are up less than 1 percent from a year ago.
ENR- 11/3/08





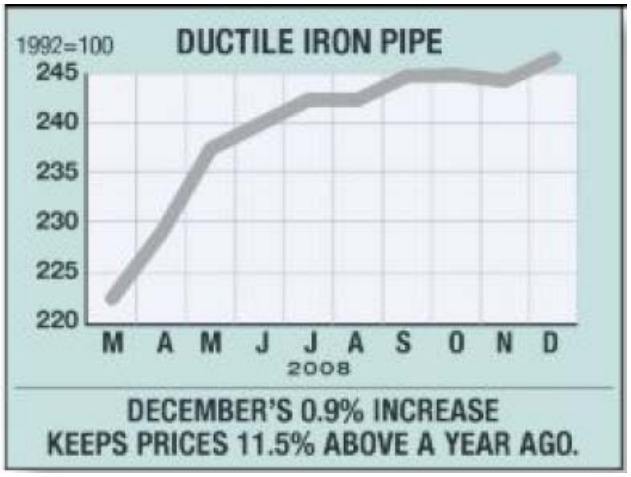
Percentage Changes in Producer Price Indexes for 2001-2008

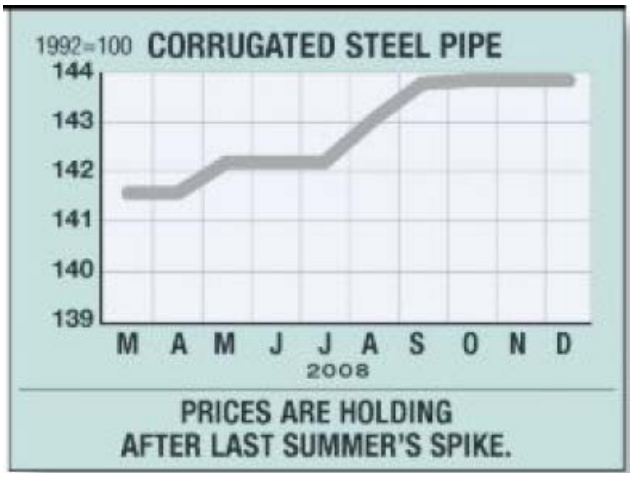
Item	2001	2002	2003	2004	2005	2006	2007	September – November 2008
Construction Sand/Gravel/ Crushed Stone	3.3	2.5	2.4	4.3	7.7	9.3	8.6	0.2
Cement	1.0	1.3	-1.1	7.9	12.2	10.5	3.5	1.1
Concrete Products	2.5	-0.3	1.5	7.6	10.1	8.1	3.3	1.0
Ready-Mix Concrete	2.5	-1.1	1.1	8.7	11.3	10.1	3.3	1.8
Precast Concrete Products	0.7	0.3	2.5	6.0	6.0	4.7	4.8	-0.7
Prestressed Concrete Products	5.3	1.8	-0.2	8.2	14.3	4.9	1.2	0.7

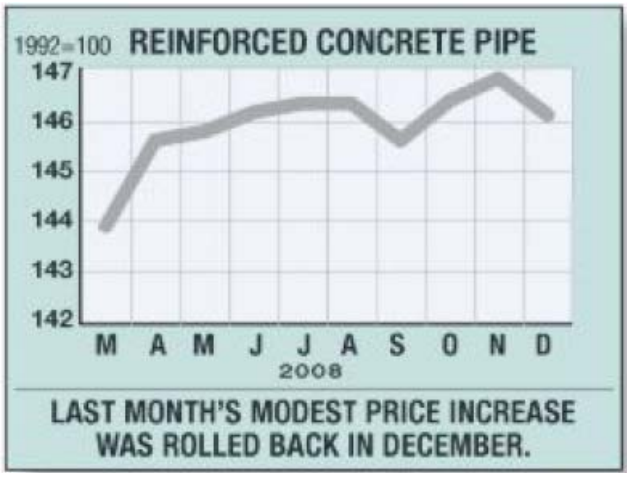
Bureau of Labor Statistics, AGC of America, 12/12/08

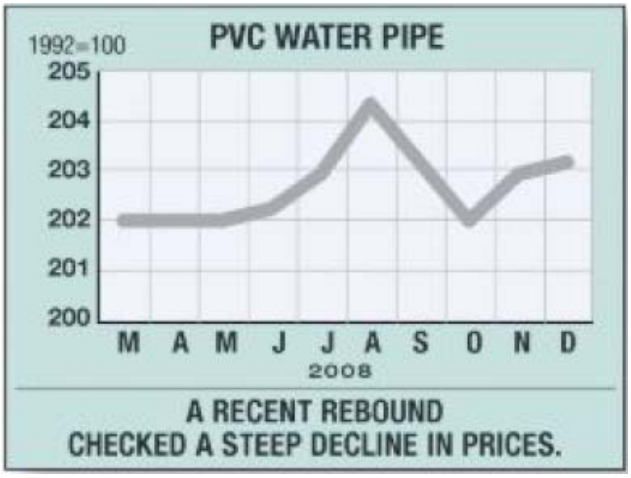
Pipe

Declining construction markets have caused unstable trends for pipe products. Double-digit gains to small declines occur depending on the markets the products are used in and the cost trends of raw materials. A spike in scrap and iron ore costs has pushed prices 12 percent above the December 2007 level. PVC water and sewer pipe prices have increased less than one percent over the same period. Copper water tubing prices fell about one percent this month and are less than 2 percent above a year ago.
ENR - 12/8/08









Percentage Changes in Producer Price Indexes for 2001-2008

Item	2001	2002	2003	2004	2005	2006	2007	September – November 2008
Concrete Pipe	4.4	1.7	1.4	5.5	7.5	2.5	1.1	-0.4

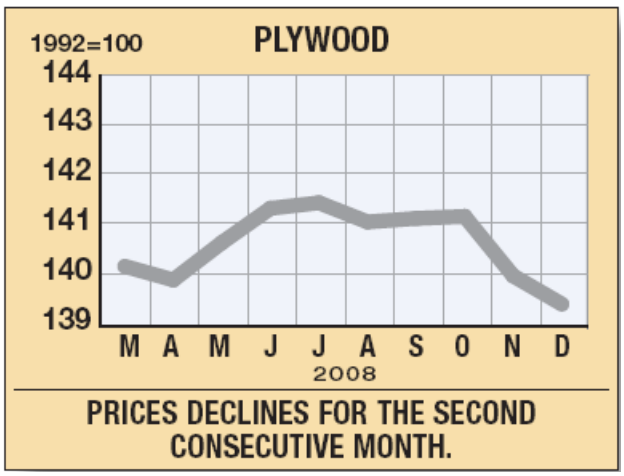
Bureau of Labor Statistics, AGC of America, 12/12/08

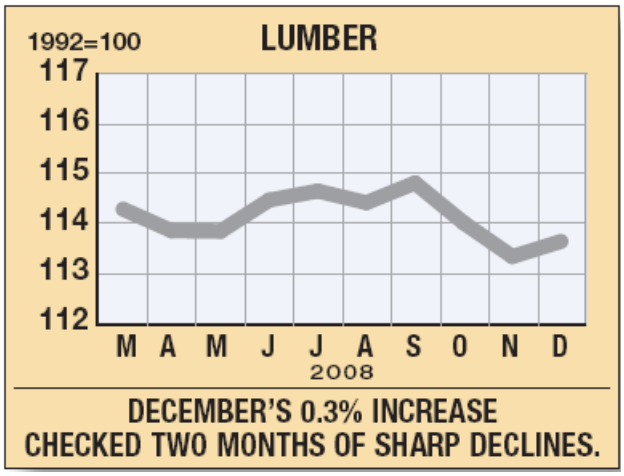
Lumber

The depressed housing market continues to undercut lumber prices. The ENR 20-city average price for pine 2 X 4s fell another 1.5 percent this month, dropping prices 4.0 percent below a year ago. Prices for fir 2 X 4s declined 0.8 percent this month, bringing fir prices 5.4 percent below a year ago. The ENR price for the most commonly used species of 2 X 4s rebounded 0.3 percent this month, following two months of steep declines, leaving this price just 1.0 percent below the 2007 year-end value.
ENR – 12/15/08

Prices appear to be crawling up from rock bottom with very modest gains between last July and September. This month's 1% decline wiped out those gains and dropped prices back to last May's level. The index is down 2% from a year ago and 37% from 2005's peak reading.
ENR – 10/20/08

A 28% decline in the value of new residential construction through the first seven months of this year compared to the same period in 2007 has pushed the ENR 20-city average price for the most commonly used species of 2X4s 2% below a year ago. ENR – 9/22/08





Percentage Changes in Producer Price Indexes for 2001-2008

Item	2001	2002	2003	2004	2005	2006	2007	September – November 2008
Lumber and Plywood	-2.9	1.4	13.1	5.0	-1.1	-10.8	-1.3	-2.0

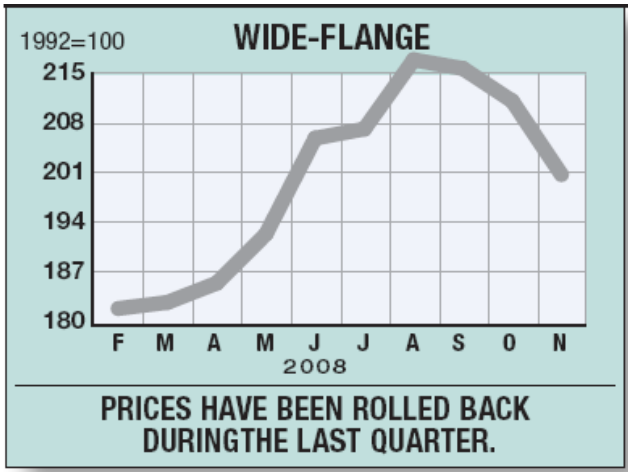
Bureau of Labor Statistics, AGC of America, 12/12/08

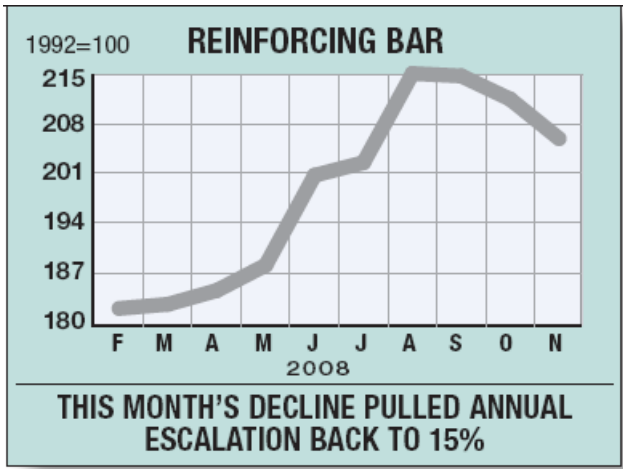
Steel

Steel prices surged to record levels during the first half of 2008. Since then the economy has been battered by bad economic news with many economists believing we are on the cusp of a recession. Steel prices have already started to retreat from last summer's peak as a result. The ENR 20-city average price for channel, wide-flange and I-beams fell nearly 5 percent this month, marking the third consecutive monthly decline. Steel prices are still 13 percent above 2007 despite the string of price cuts.
ENR – 11/24/08

Prices for both reinforcing bar and structural steel are starting to ease off record levels after strong increases through the first eight months of this year. The ENR 20-city average price for grade-60 rebar slipped 1.5 percent in October, cutting annual inflation from 26 percent in August to 19 percent. The ENR structural steel prices posted similar results, with monthly declines of 1.2 percent for channel beams, 1.3 percent for I-beams and 2.1 percent for channel beams. The average price for these three products is 19 percent above 2007.
ENR – 10/27/08

The ENR 20-city average price for structural steel, reinforcing bars, and steel plate all paused this month after posting sharp increases between last April and August. The September breather left the average price for channel, wide-flange, and I-beams 20% above a year ago. Prices for rebar came to rest 23% above the 2007 level while steel plate prices increased 25%. Last spring's spike in steel scrap prices helped to drive all three products up but scrap prices are starting to ease.
ENR – 9/29/08, 10/6/08





Percentage Changes in Producer Price Indexes for 2001-2008

Item	2001	2002	2003	2004	2005	2006	2007	September – November 2008
Steel Mill Products	-6.1	11.1	1.7	48.8	-3.8	11.6	1.0	-9.0
Hot-rolled Bars, Plates, and Structural Shapes	-4.3	2.1	11.3	53.8	-1.0	7.5	8.1	-10.7
Steel Pipe and Tube	-3.7	9.1	3.3	66.0	1.2	5.5	-1.9	-4.4
Fabricated Structural Metal	-1.3	-2.4	0.1	24.7	2.8	3.6	5.3	-2.8

Bureau of Labor Statistics, AGC of America, 12/12/08

Estimate Support Meeting Minutes

October 13, 2008

How can the estimate support meeting group be more relevant to the regions and other designers? What other information can we provide to regions to help them do their jobs better?

- Compile contractor insights
- Have Squad leaders report on current estimating issues

Working on inflation forecasts for future projects.

November 3, 2008

Discussed the Additive Work Special Provision.
Write and distribute an inflation update memo

December 1, 2008

Discussed updating Red Flag percentages based on current bidding environment.

Do you have estimating questions? Call Jason Henrie at 801-957-8605.

Do you have a suggestion for something you would like researched for a future edition of the Estimator's Corner Newsletter? Your suggestions are welcome and make the information in the Newsletter more useful for the readers.

Do you know anyone who would like to receive the monthly Estimator's Corner Newsletter? Please send your suggestions, ideas, questions, and requests to estimatorscorner@utah.gov and we will do our best to implement them.

Percentage Changes in Producer Price Indexes (PPIs) for Construction Materials and Components, 2001-2008

BLS Series ID		12 months through December--							to November 2008 since--			
		2001	2002	2003	2004	2005	2006	2007	9/08	7/08	10/07	12/03
Table 1: Changes in Consumer, Producer & Construction Prices												
CUUR0000SA0	*Consumer price index (CPI-U) (through Oct.)*	*1.6*	*2.4*	*1.9*	*3.3*	*3.4*	*2.5*	*4.1*	*-1.0*	*-1.5*	*3.7*	*17.5*
WPUSOP3000	Producer price index (PPI) for finished goods	-1.6	1.2	4.0	4.2	5.4	1.1	6.3	-2.9	-5.5	0.4	19.1
PCUBCON	PPI for inputs to construction industries	-0.9	0.7	3.0	9.1	8.2	4.6	4.5	-3.2	-5.4	4.9	36.3
PCUBHWY	PPI for inputs to highway and street construction	-3.6	1.0	2.6	10.8	14.1	6.2	9.6	-6.6	-11.4	3.7	54.8
PCUBHVY	PPI for inputs to other heavy construction	-2.6	1.0	2.6	13.4	8.8	5.5	6.4	-4.8	-8.6	4.0	46.1
PCUBBLD	PPI for inputs to nonresidential buildings	-0.5	0.7	2.4	9.3	7.4	4.0	4.6	-3.3	-5.5	4.2	34.1
PCUBRSM	PPI for inputs to multi-unit residential	-0.1	0.4	2.7	8.9	7.8	4.9	3.7	-1.9	-3.5	4.5	33.7
PCUBRS1	PPI for inputs to single-unit residential	-0.4	0.6	3.5	7.0	6.9	4.2	2.4	-1.3	-1.8	6.2	29.8
Table 2: Changes in PPIs for New Buildings and Components												
PCU236211	New industrial building construction	not available before 2008; series began 6/07							-0.1	4.4	7.5	n.a.
PCU236221	New warehouse construction	not available before 2005				7.5	8.1	4.4	0.0	3.7	6.3	n.a.
PCU236222	New school construction	not available; series began 12/05					17.3	2.0	0.2	5.8	8.2	n.a.
PCU236223	New office construction	not available; series began 6/06						4.8	0.3	4.6	6.3	n.a.
PCU23811X	Concrete contractors, nonresidential building work	not available; series began 12/07							0.6	2.2	n.a.	n.a.
PCU23816X	Roofing contractors, nonresidential building work	not available; series began 12/07							0.3	4.0	n.a.	n.a.
PCU23821X	Electrical contractors, nonresidential building work	not available; series began 12/07							0.1	3.0	n.a.	n.a.
PCU23822X	Plumbing contractors, nonresidential building work	not available; series began 12/07							0.1	4.0	n.a.	n.a.
Table 3: Changes in PPIs for Specific Construction Inputs												
WPU057303	#2 diesel fuel	-44.7	54.4	13.0	37.9	46.7	2.3	33.9	-20.3	-35.2	-24.2	129.3
WPU05810112	Asphalt (at refinery)	not available		10.0	18.3	17.8	34.9	5.8	-15.3	-26.5	57.8	247.5
WPU139401	Asphalt paving mixtures and blocks	0.9	2.0	3.7	4.3	14.3	27.6	1.3	-0.5	-1.5	44.9	124.8
WPU136	Asphalt felts and coatings	4.6	-0.6	6.3	4.1	15.3	5.0	-2.5	-1.8	8.8	57.3	96.0
WPU1361	Prepared asphalt & tar roofing & siding products	5.0	-1.7	5.3	4.6	16.2	5.2	-2.4	-1.1	2.5	55.0	96.7
WPU133	Concrete products	2.5	-0.3	1.5	7.6	10.1	8.1	3.3	1.0	1.5	4.6	38.6
WPU1331	Concrete block and brick	2.3	1.6	3.2	4.7	8.1	6.8	3.2	-0.1	1.5	4.4	30.3
WPU1332	Concrete pipe	4.4	1.7	1.4	5.5	7.5	2.5	1.1	-0.4	-0.6	9.7	33.4
WPU1333	Ready-mixed concrete	2.5	-1.1	1.1	8.7	11.3	10.1	3.3	1.8	2.6	4.4	43.1
WPU1334	Precast concrete products	0.7	0.3	2.5	6.0	6.0	4.7	4.8	-0.7	-0.7	3.8	28.1
WPU1335	Prestressed concrete products	5.3	1.8	-0.2	8.2	14.3	4.9	1.2	0.7	-0.9	3.8	38.5
WPU1342	Brick and structural clay tile	5.3	1.9	0.7	3.0	9.4	6.0	-0.2	0.5	0.3	0.7	20.0
WPU072106	Plastic construction products	-2.7	3.1	3.2	7.2	21.6	-0.7	0.3	-1.1	-0.1	5.5	36.5
WPU137	Gypsum products	0.4	3.4	2.8	20.0	18.8	5.5	-22.2	0.7	1.1	6.4	25.7
WPU1392	Insulation materials	0.4	-1.5	2.0	8.6	2.6	2.1	-3.3	0.6	1.5	0.6	11.1
WPUSI004011	Lumber and plywood	-2.9	1.4	13.1	5.0	-1.1	-10.8	-1.3	-2.0	-6.1	-6.0	-13.0
WPU062101	Architectural coatings	2.9	0.6	3.9	5.3	9.2	6.3	4.1	0.2	-0.4	10.6	40.9
WPU1017	Steel mill products	-6.1	11.1	1.7	48.8	-3.8	11.6	1.0	-9.0	-16.0	21.3	93.8
WPU101704	Hot-rolled bars, plates, & structural shapes	-4.3	2.1	11.3	53.8	-1.0	7.5	8.1	-10.7	-21.9	13.4	99.2
WPU101706	Steel pipe and tube	-3.7	9.1	3.3	66.0	1.2	5.5	-1.9	-4.4	-3.5	34.5	134.1
WPU102502	Copper and brass mill shapes	-9.5	-1.6	11.6	29.6	31.0	44.4	-3.8	-11.3	-25.4	-18.9	99.0
WPU102501	Aluminum mill shapes	-2.9	-0.9	-0.5	9.9	5.0	12.7	-1.7	-3.8	-8.6	-1.1	26.3
WPU1073	Sheet metal products	-0.8	2.0	0.6	15.2	0.4	6.5	0.4	-0.2	-0.5	9.4	35.0
WPU107405	Fabricated structural metal	-1.3	-2.4	0.1	24.7	2.8	3.6	5.3	-2.8	-3.0	13.2	57.6
WPU10740501	Fabricated structural metal for buildings	-1.5	-3.3	-0.1	20.0	3.1	3.3	4.7	-4.6	-4.5	8.3	44.8
WPU107408	Architectural and ornamental metalwork	-0.1	3.7	0.7	23.5	3.1	4.9	2.8	-1.2	5.7	23.7	68.2
WPU107409	Fabricated iron & steel pipe, tube, & fittings	0.6	0.1	1.2	32.6	5.5	-2.8	-1.6	-1.2	-0.5	12.0	50.1
WPU1076	Fabricated steel plate	0.6	-1.0	0.6	7.6	0.6	8.6	9.9	-0.8	2.7	26.3	53.1
WPU1079	Prefabricated metal buildings	0.0	4.0	-0.7	35.5	2.0	5.5	1.8	-1.7	-1.6	26.4	87.9
WPU112	Construction machinery and equipment	-0.1	1.9	1.3	6.0	4.9	3.6	2.2	1.1	2.1	5.1	23.6
Table 4: Changes in PPIs for Basic Inputs Important to Construction												
WPU056	Crude petroleum (domestic production)	-42.4	60.6	14.3	30.5	49.6	0.1	52.4	-30.2	-53.0	-40.4	80.8
WPU0553	Industrial natural gas	-36.7	12.2	20.3	20.1	31.5	-13.2	-4.6	-2.9	-14.3	8.0	40.9
WPU066	Plastic resins and materials	-9.8	9.2	6.4	28.6	10.8	-7.8	10.0	-5.6	-11.3	4.9	50.0
WPU1321	Construction sand/gravel/crushed stone	3.3	2.5	2.4	4.3	7.7	9.3	8.6	0.2	0.8	6.4	41.9
WPU1322	Cement	1.0	1.3	-1.1	7.9	12.2	10.5	3.5	1.1	-0.2	-0.6	39.5
WPU1011	Iron ore	1.5	-1.3	1.6	6.7	15.5	7.5	1.3	0.0	0.0	12.1	50.5
WPU1012	Iron and steel scrap	-5.6	27.8	64.9	50.8	-10.8	2.9	30.4	-41.7	-72.1	-44.9	-6.6
WPU101212	Stainless and alloy steel scrap *(no data for 11/08)*	no data from 1996 until September 2006						-7.7	n.a.	n.a.	n.a.	n.a.
WPU102102	Copper ores	-19.6	3.6	37.4	65.1	39.3	53.1	-0.9	-30.4	-40.4	-28.7	161.9
WPU102301	Copper base scrap	-17.4	11.2	30.7	34.5	51.9	50.0	1.2	-35.3	-56.4	-51.4	57.5

Updated 12/12/08 Source: Bureau of Labor Statistics (BLS): www.bls.gov/cpi for CPI, www.bls.gov/ppi for PPIs

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